

SEQUENCES

SEQ ID #1

agfA DNA sequence

ATGAAACTTTTAAAAGTGGCAGCATTTCGCAGCAATCGTAGTTTCTGGCAGTGCTCTGGCTGG
CGTCGTTCCACAATGGGGCGGCGGGCGGTAATCATAACGGCGGCGGCAATAGTTCCGGCCCCGG
ACTCAACGTTGAGCATTATCAGTACGGTTCGCTAACGCTGCGCTTGCTCTGCAAAGCGAT
GCCCCGTAATCTGAAACGACCATTACCCAGAGCGGTTATGGTAACGGCGCCGATGTAGGCCA
GGGTGCGGATAATAGTACTATTGAACTGACTCAGAAATGGTTTCAGAAATAATGCCACCATCG
ACCAAGTGGAACGCTAAAACTCCGATATTACTGTGCGCCAATACGGCGGTAATAACGCCCGCG
CTGGTTAATCAGACCGCATCTGATTCCAGCGTAATGGTGCGTCAGGTTGGTTTTGGCAACAA
CGCCACGGCTAACCAAGTATTAA

SEQ ID #2

agfB DNA Sequence

ATGAAAAACAAATTGTTATTTATGATGTTGACAATACTGGGTGCGCCTGGGATTGCAACCGC
GACAAATTATGATCTGGCTCGTTTCAGAATATAATTTTTCGGTAAATGAATTAAGCAAGTCTT
CATTTAATCAGGCGGCCATTATTGGTCAAGTCGGCACGGATAATAGTGCCAGAGTACGCCAG
GAAGGATCAAACTATTGTCCGTTATTTTACAAGAAGGAGGAAATAATCGGGCGAAAGTCGA
CCAGGCAGGGAATTATAACTTTGCGTATATTGAGCAAACGGGCAATGCCAACGATGCCAGTA
TATCGCAAAGCGCTTACGGTAATAGTGAGCTATTATCCAGAAAGGTTCTGGAAATAAGGCC
AATATTACCCAGTACGGTACGCAGAAAACAGCAGTTGTAGTGAGAAACAGTCGCATATGGC
TATTCGCGTCACCCAACGCTAA

SEQ ID #3

csgA DNA Sequence

ATGAAACTTTTAAAAGTAGAAGCAATTGCAGCAATCGTATTCTCCGGTAGCGCTCTGGCAGG
TGTTGTTCTCAGTACGGCGGCGGCGGTAACCACGGTGGTGGCGGTAATAATAGCGGCCCAA
ATTCTGAGCTGAACATTTACCAGTACGGTGGCGGTAACCTCTGCACTTGCTCTGCAAAGTAT
GCCCCGTAATCTGACTTGACTATTACCCAGCATGGCGGCGGTAATGGTGCAGATGTTGGTCA
GGGCTCAGATGACAGCTCAATCGATCTGACCCAACGTGGCTTCGGTAACAGCGCTACTCTTG
ATCAGTGGAACGGCAAAAATTCTGAAATGACGGTTAAACAGTTCGGTGGTGGCAACGGTGCT
GCAGTTGACCAGACTGCATCTAACTCCTCCGTCAACGTGACTCAGGTTGGCTTTGGTAACAA
CGCGACCGCTCATCAGTACTAA

SEQ ID #4

csgB DNA Sequence

ATGAAAAACAAATTGTTATTTATGATGTTAACAATACTGGGTGCGCCTGGGATTGCAGCCGC
AGCAGGTTATGATTTAGCTAATTCAGAATATAACTTCGCGGTAATGAATTGAGTAAGTCTT
CATTTAATCAGGCAGCCATAATTGGTCAAGCTGGGACTAATAATAGTGCTCAGTTACGGCAG

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GGAGGCTCAAACTTTTGGCGGTTGTTGCGCAAGAAGGTAGTAGCAACCGGGCAAAGATTGA
CCAGACAGGAGATTATAACCTTG CATATATTGATCAGGCGGGCAGTGCCAACGATGCCAGTA
TTTCGCAAGGTGCTTATGGTAATACTGCGATGATTATCCAGAAAGGTTCTGGTAATAAAGCA
AATATTACACAGTATGGTACTCAAAAAACGGCAATTGTAGTGCAGAGACAGTCGCAAATGGC
TATTCGCGTGACACAACGTAA

SEQ ID #5

AgfA protein Sequence

MKLLKVAFAAIVVSGSALAGVVPQWGGGGNHNGGGNSSGPDSTLSIYQYGSANAALALQSD
ARKSETTITQSGYGNADVGQGADNSTIELTQNGFRNNATIDQWNAKNSDITVGQYGGNNAA
LVNQ TASDSSVMVRQVGF GNNATANQY

SEQ ID #6

AgfB protein Sequence

MKNKLLFMMLTILGAPGIATATNYDLARSEYNFAVNELSKSSFNQAAIIGQVGT DNSARVRQ
EGSKLLSVISQEGGNNRAKVDQAGNYNFAYIEQTGNANDASISQSAYGNSAAIIQKSGGNKA
NITQYGTQKTAVVVQKQSHMAIRVTQR

SEQ ID #7

CsgA protein sequence

MKLLKVAIAAIVFSGSALAGVVPQYGGGGNHGGGGNNSGPNSELNIYQYGGGNSALALQTD
ARNSDLTITQHGGGNGADVGQGSDDSSIDL TQRGFGNSATLDQWNGKNSEMTVKQFGGGNGA
AVDQTASNSSVNVTQVGF GNNATAHQY

SEQ ID #8

CsgB protein sequence

MKNKLLFMMLTILGAPGIAAAAGYDLANSEYNFAVNELSKSSFNQAAIIGQAGTNNSAQLRQ
GGSKLLAVVAQEGSSNRAKIDQTGDYNLAYIDQAGSANDASISQGAYGNTAMIIQKSGGNKA
NITQYGTQKTAIVVQRQSQMAIRVTQR

SEQ ID #9

PT3 epitope DNA sequence

TATGATCAGCTGGTTACCCGTGTTGTTACCCATGAAATGGCACATGCA

SEQ ID #10

PT3 epitope protein sequence

YDQLVTRVVTHEMAHA

SEQ ID #11

AgfA::PT3#1 DNA sequence

005040-040500

ATGAAACTTTTAAAAGTGGCAGCATTTCGCAGCAATCGTAGTTTCTGGCAGTGCTCTGGCTGG
CGTCGTTCCACAATGGGGCGGCGGCGGTAATCATAACGGCGGCGGCAATAGTTCCGGCCCCG
ACTCAACGTTGAGCATTTATCAGTACGGTTCCGCTAACGCTGCGCTTGCTCTGCAAAGCGAT
GCCCCGTAAATCTGAAACGACCATTACCCAGAGCGGTTATGGTAACGGCGCCGATGTAGGCCA
GGGTGCGGATAATAGTACTATTGAACTGACTCAGAATGGTTTCAGAAATAATGCCACCATCG
ACCAGTGGAACGCTAAAACTCCGATATTACTGTTCGGCCAATACGGCGGTAATAACGCCGCG
CTGGTTAATTATGATCAGCTGGTTACCCGTGTTGTTACCCATGAAATGGCACATGCAACAA
CGCCACGGCTAACCAGTATTAA

SEQ ID #12

AgfA::PT3#1 protein sequence

MKLLKVAFAAIVVSGSALAGVVPQWGGGNHNGGNSSGPDSTLSIYQYGSANAALALQSD
ARKSETTITQSGYNGADVQGADNSTIELTQNGFRNNATIDQWNAKNSDITVGQYGGNNAA
LVNYDQLVTRVVTHEMAHANNATANQY

SEQ ID #13

AgfA::PT3#2 DNA sequence

ATGAAACTTTTAAAAGTGGCAGCATTTCGCAGCAATCGTAGTTTCTGGCAGTGCTCTGGCTGG
CGTCGTTCCACAATGGGGCGGCGGCGGTAATCATAACGGCGGCGGCAATAGTTCCGGCCCCG
ACTCAACGTTGAGCATTTATCAGTACGGTTCCGCTAACGCTGCGCTTGCTCTGCAAAGCGAT
GCCCCGTAAATCTGAAACGACCATTACCCAGAGCGGTTATGGTAACGGCGCCGATGTAGGCCA
GGGTGCGGATAATAGTACTATTGAACTGACTCAGAATGGTTTCAGAAATAATGCCACCATCG
ACCAGTGGAACGCTAAAACTCCGATATTACTGTTCGGCCAATATGATCAGCTGGTTACCCGT
GTTGTTACCCATGAAATGGCACATGCAAGCGTAATGGTGCGTCAGGTTGGTTTTGGCAACAA
CGCCACGGCTAACCAGTATTAA

SEQ ID #14

AgfA::PT3#2 protein sequence

MKLLKVAFAAIVVSGSALAGVVPQWGGGNHNGGNSSGPDSTLSIYQYGSANAALALQSD
ARKSETTITQSGYNGADVQGADNSTIELTQNGFRNNATIDQWNAKNSDITVGQYDQLVTR
VVTHEMAHASVMVRQVGFNNATANQY

SEQ ID #15

AgfA::PT3#3 DNA sequence

ATGAAACTTTTAAAAGTGGCAGCATTTCGCAGCAATCGTAGTTTCTGGCAGTGCTCTGGCTGG
CGTCTATGATCAGCTGGTTACCCGTGTTGTTACCCATGAAATGGCACATGCATCCGGCCCCG
ACTCAACGTTGAGCATTTATCAGTACGGTTCCGCTAACGCTGCGCTTGCTCTGCAAAGCGAT
GCCCCGTAAATCTGAAACGACCATTACCCAGAGCGGTTATGGTAACGGCGCCGATGTAGGCCA
GGGTGCGGATAATAGTACTATTGAACTGACTCAGAATGGTTTCAGAAATAATGCCACCATCG
ACCAGTGGAACGCTAAAACTCCGATATTACTGTTCGGCCAATACGGCGGTAATAACGCCGCG

CTGGTTAATCAGACCGCATCTGATTCCAGCGTAATGGTGCGTCAGGTTGGTTTTGGCAACAA
CGCCACGGCTAACCAGTATTAA

SEQ ID #16

AgfA::PT3#3 protein sequence

MKLLKVAAFAAIVVSGSALAGVYDQLVTRVVTHEMAHASGPDSTLSIYQYGSANAALALQSD
ARKSETTITQSGYNGADVGGADNSTIELTQNGFRNNATIDQWNAKNSDITVGQYGGNNAA
LVNQ TASDSSVMVRQVGF GNNATANQY

SEQ ID #17

AgfA::PT3#4 DNA sequence

ATGAAACTTTTAAAAGTGGCAGCATTTCGCAGCAATCGTAGTTTCTGGCAGTGCTCTGGCTGG
CGTCGTTCCACAATGGGGCGGCGGCGGTAATCATAACGGCGGCGGCAATAGTTCCGGCCCCGG
ACTATGATCAGCTGGTTACCCGTGTTGTTACCCATGAAATGGCACATGCACTGCAAAGCGAT
GCCCCGTAAATCTGAAACGACCATTACCCAGAGCGGTTATGGTAACGGCGCCGATGTAGGCCA
GGGTGCGGATAATAGTACTATTGAACTGACTCAGAATGGTTTCAGAAATAATGCCACCATCG
ACCA GTGGAACGCTAAAACTCCGATATTACTGT CGGCCAATACGGCGGTAATAACGCCGCG
CTGGTTAATCAGACCGCATCTGATTCCAGCGTAATGGTGCGTCAGGTTGGTTTTGGCAACAA
CGCCACGGCTAACCAGTATTAA

SEQ ID #18

AgfA::PT3#4 protein sequence

MKLLKVAAFAAIVVSGSALAGVVPQWGGGNHNGGGNSSGPDYDQLVTRVVTHEMAHALQSD
ARKSETTITQSGYNGADVGGADNSTIELTQNGFRNNATIDQWNAKNSDITVGQYGGNNAA
LVNQ TASDSSVMVRQVGF GNNATANQY

SEQ ID #19

AgfA::PT3#5 DNA sequence

ATGAAACTTTTAAAAGTGGCAGCATTTCGCAGCAATCGTAGTTTCTGGCAGTGCTCTGGCTGG
CGTCGTTCCACAATGGGGCGGCGGCGGTAATCATAACGGCGGCGGCAATAGTTCCGGCCCCGG
ACTCAACGTTGAGCATTATCAGTACGGTTCCGCTAACGCTGCGCTTGCTCTGCAAAGCGAT
GCCCCGTAAATATGATCAGCTGGTTACCCGTGTTGTTACCCATGAAATGGCACATGCAGGCCA
GGGTGCGGATAATAGTACTATTGAACTGACTCAGAATGGTTTCAGAAATAATGCCACCATCG
ACCA GTGGAACGCTAAAACTCCGATATTACTGT CGGCCAATACGGCGGTAATAACGCCGCG
CTGGTTAATCAGACCGCATCTGATTCCAGCGTAATGGTGCGTCAGGTTGGTTTTGGCAACAA
CGCCACGGCTAACCAGTATTAA

SEQ ID #20

AgfA::PT3#5 protein sequence

005040-2014560

MKLLKVAAFAAIIVSGSALAGVVPQWGGGGNHNGGGNSSGPDSTLSIYQYGSANAALALQSD
 ARKYDQLVTRVVTHEMAHAGQGADNSTIELTQNGFRNNATIDQWNAKNSDITVGQYGGNNAA
 LVNQ TASDSSVMVRQVGF GNNATANQY

SEQ ID #21

AgfA::PT3#6 DNA sequence

ATGAAACTTTTAAAAGTGGCAGCATTTCGCAGCAATCGTAGTTTCTGGCAGTGCTCTGGCTGG
 CGTCGTTCCACAATGGGGCGGCGGCGGTAATCATAACGGCGGCGGCAATAGTTCGGCCCCG
 ACTCAACGTTGAGCATTTATCAGTACGGTTCCGCTAACGCTGCGCTTGCTCTGCAAAGCGAT
 GCCCGTAAATCTGAAACGACCATTACCCAGAGCGGTTATGGTAACGGCGCCGATGTAGGCCA
 GGGTGCGGATAATTATGATCAGCTGGTTACCCGTGTTGTTACCCATGAAATGGCACATGCAG
 ACCAGTGGAACGCTAAAACTCCGATATTACTGTCCGCCAATACGGCGGTAATAACGCCGCG
 CTGGTTAATCAGACCGCATCTGATTCCAGCGTAATGGTGCGTCAGGTTGGTTTTGGCAACAA
 CGCCACGGCTAACCAGTATTAA

SEQ ID #22

AgfA::PT3#6 protein sequence

MKLLKVAAFAAIIVSGSALAGVVPQWGGGGNHNGGGNSSGPDSTLSIYQYGSANAALALQSD
 ARKSETTITQSGYNGADVQGADNYDQLVTRVVTHEMAHADQWNAKNSDITVGQYGGNNAA
 LVNQ TASDSSVMVRQVGF GNNATANQY

SEQ ID #23

AgfA::PT3#7 DNA sequence

ATGAAACTTTTAAAAGTGGCAGCATTTCGCAGCAATCGTAGTTTCTGGCAGTGCTCTGGCTGG
 CGTCGTTCCACAATGGGGCGGCGGCGGTAATCATAACGGCGGCGGCAATAGTTCGGCCCCG
 ACTCAACGTTGAGCATTTATCAGTACGGTTCCGCTAACGCTGCGCTTGCTCTGCAAAGCGAT
 GCCCGTAAATCTGAAACGACCATTACCCAGAGCGGTTATGGTAACGGCGCCGATGTAGGCCA
 GGGTGCGGATAATAGTACTATTGAACTGACTCAGAATGGTTTCAGAAATAATGCCACCATCG
 ACCAGTGGAACGCTAAAACTATGATCAGCTGGTTACCCGTGTTGTTACCCATGAAATGGCA
 CATGCAAATCAGACCGCATCTGATTCCAGCGTAATGGTGCGTCAGGTTGGTTTTGGCAACAA
 CGCCACGGCTAACCAGTATTAA

SEQ ID #24

AgfA::PT3#7 protein sequence

MKLLKVAAFAAIIVSGSALAGVVPQWGGGGNHNGGGNSSGPDSTLSIYQYGSANAALALQSD
 ARKSETTITQSGYNGADVQGADNSTIELTQNGFRNNATIDQWNAKNYDQLVTRVVTHEMA
 HANQTASDSSVMVRQVGF GNNATANQY

SEQ ID #25

AgfA::PT3#8 DNA sequence

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ATGAAACTTTTAAAAGTGGCAGCATTTCGCAGCAATCGTAGTTTCTGGCAGTGCTCTGGCTGG
CGTCGTTCCACAATGGGGCGGCGGCGGTAATCATAACGGCGGCGGCAATAGTTCCGGCCCCGG
ACTCAACGTTGAGCATTTATCAGTACGGTTCCGCTAACGCTGCGCTTTATGATCAGCTGGTT
ACCCGTGTTGTTACCCATGAAATGGCACATGCAGGTTATGGTAACGGCGCCGATGTAGGCCA
GGGTGCGGATAATAGTACTATTGAACTGACTCAGAATGGTTTCAGAAATAATGCCACCATCG
ACCAGTGGAACGCTAAAACTCCGATATTACTGTCTGGCCAATACGGCGGTAATAACGCCCGCG
CTGGTTAATCAGACCGCATCTGATTCCAGCGTAATGGTGCGTCAGGTTGGTTTTGGCAACAA
CGCCACGGCTAACCAGTATTAA

SEQ ID #26

AgfA::PT3#8 protein sequence

MKLLKVAFAAIVVSGSALAGVVPQWGGGNHNHGGNSSGPDSTLSIYQYGSANAALYDQLV
TRVVTHEMAHAGYGNADVGGADNSTIELTQNGFRNNATIDQWNAKNSDITVGQYGGNNAA
LVNQ TASDSSVMVRQVGFNNATANQY

SEQ ID #27

AgfA::PT3#9 DNA sequence

ATGAAACTTTTAAAAGTGGCAGCATTTCGCAGCAATCGTAGTTTCTGGCAGTGCTCTGGCTGG
CGTCGTTCCACAATGGGGCGGCGGCGGTAATCATAACGGCGGCGGCAATAGTTCCGGCCCCGG
ACTCAACGTTGAGCATTTATCAGTACGGTTCCGCTAACGCTGCGCTTGCTCTGCAAAGCGAT
GCCCCGTAAATCTGAAACGACCATTACCCAGAGCGGTTATGGTAACGGCGCCGATTATGATCA
GCTGGTTACCCGTGTTGTTACCCATGAAATGGCACATGCATTCAGAAATAATGCCACCATCG
ACCAGTGGAACGCTAAAACTCCGATATTACTGTCTGGCCAATACGGCGGTAATAACGCCCGCG
CTGGTTAATCAGACCGCATCTGATTCCAGCGTAATGGTGCGTCAGGTTGGTTTTGGCAACAA
CGCCACGGCTAACCAGTATTAA

SEQ ID #28

AgfA::PT3#9 protein sequence

MKLLKVAFAAIVVSGSALAGVVPQWGGGNHNHGGNSSGPDSTLSIYQYGSANAALALQSD
ARKSETTITQSGYNGADYDQLVTRVVTHEMAHAFRNNATIDQWNAKNSDITVGQYGGNNAA
LVNQ TASDSSVMVRQVGFNNATANQY

SEQ ID #29

AgfA::PT3#10 DNA sequence

ATGAAACTTTTAAAAGTGGCAGCATTTCGCAGCAATCGTAGTTTCTGGCAGTGCTCTGGCTGG
CGTCGTTCCACAATGGGGCGGCGGCGGTAATCATAACGGCGGCGGCAATAGTTCCGGCCCCGG
ACTCAACGTTGAGCATTTATCAGTACGGTTCCGCTAACGCTGCGCTTGCTCTGCAAAGCGAT
GCCCCGTAAATCTGAAACGACCATTACCCAGAGCGGTTATGGTAACGGCGCCGATGTAGGCCA
GGGTGCGGATAATAGTACTATTGAACTGACTCAGAATGGTTTCAGAAATAATGCCACCTATG
ATCAGCTGGTTACCCGTGTTGTTACCCATGAAATGGCACATGCAGGCGGTAATAACGCCCGCG

CTGGTTAATCAGACCGCATCTGATTCCAGCGTAATGGTGCGTCAGGTTGGTTTTGGCAACAA
CGCCACGGCTAACCAGTATTAA

SEQ ID #30

AgfA::PT3#10 protein sequence

MKLLKVAAFAAIVVSGSALAGVVPQWGGGGNHNGGNSSGPDSTLSIYQYGSANAALALQSD
ARKSETTITQSGYNGADVGQGADNSTIELTQNGFRNNATYDOLVTRVVTHEMAHAGGNNA
LVNQTASDSSVMVRQVGFNNATANQY

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